



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,299	12/24/2001	Nevenka Dimitrova	US010671	3003
24737	7590	04/05/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			JONES III, CLYDE H	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,299	DIMITROVA ET AL.	
	Examiner	Art Unit	
	Clyde H. Jones III	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/08/02, 12/24/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 22 is objected to because of the following informalities: On line 1 of claim 22, phrase "the non-monotonic logic comprises modal logic" should be changed to -- a non-monotonic logic comprises modal logic --. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-44 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-44 recite readable medium or memory having a mere arrangement of data that is non-functional descriptive material. Non-functional descriptive material, such as music, photographs and mere arrangements of data or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. Further when non-functional descriptive material is recorded on some computer readable medium in a computer, it is not statutory since no requisite functionality is present to satisfy the practical application requirement.

Note to Applicant: Alternatively, if claims 23-33 recite a computer program (data processing method executing at least the following operations in a data processing device) then this is functional descriptive material (i.e. data structures).

Alternatively, if claims 34-44 recite computer program (a medium-readable...embodying code for causing the data processing device to perform the operations...), then this is functional descriptive material (i.e. data structures).

Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. The data structures do not define any structural and functional interrelationships between the data and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer programs functionality to be realized.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2623

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 4, 7-12, 14, 17, 20, 23-27, 30, 34-38, and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Arellano et al. (US 2004/0128624 A1).

Regarding claims 1, 23, and 34, Arellano teaches a medium readable by a data processing device (and corresponding method and code) and embodying at least one adaptive personal memory comprising embodiments of:

personal information (par. 88 & 90);

facts (EPG data/content elements) derived from content experienced by at least one relevant user (par. 110; par. 109, lines 16-21; par. 94; par. 103, lines 5-8; par. 111, lines 6-8; par. 112); and

facts (trends/patterns) derived from the relevant user's behavior (par. 88; par. 92, lines 1-4; par. 89, lines 1-3; par. 114, lines 3-7; par. 132).

Regarding claim 3, Arellano teaches the facts derived from content comprise a summary (characterizations) of a relevant piece of content (par. 109, lines 16-21; par. 100; par. 112).

Regarding claim 4, Arellano teaches the data structures comprise a hierarchy (categories) of linked index nodes (correlated features/content types), wherein each index node (feature) corresponds to a subcategory of information

Art Unit: 2623

(feature value) (par. 94-95; par. 103, lines 3-8; par. 100; par. 109, lines 16-18; par. 112).

Regarding claims 7, 24 and 35, Arellano teaches the facts derived from user behaviors include at least one record of presence of the user (par. 118-119).

Regarding claim 8, Arellano teaches the facts derived from user behaviors include at least one record of queries (request) (par. 127-128).

Regarding claims, 9, 14, 20, Arellano teaches at least one snapshot, which snapshot data acts as a bias toward a longer term view of user behavior (par. 90, par. 18).

Regarding claim 10, Arellano teaches at least one medium according to claim 1;

at least one processor adapted to perform operations to make the medium into a personal adaptive memory, the operations including the following:

maintaining adaptive personal memory embodied in the medium (par. 114);

capturing content experienced by the relevant user (par. 112; par. 110; par. 109, lines 16-21; par. 94; par. 103, lines 5-8; par. 111, lines 6-8) and the relevant user's behaviors (par. 105; par. 88; par. 92, lines 1-4; par. 89, lines 1-3; par. 114, lines 3-7; par. 132);

analyzing the content and behaviors to create updated data(par. 127-128);
and

updating the adaptive personal memory embodied in the medium with the
updated data (par. 178).

Regarding claims 11, 27, and 38, Arellano teaches the operations further
comprise interfacing with the relevant user responsive to the adaptive personal
memory (par. 117-126; par. 110; par. 183; par. 154-155) and to acquire more
data from the relevant user (par. 128).

Regarding claims 12, 17, 30, and 41, Arellano teaches interfacing further
comprises one of recommending new content based on the adaptive personal
memory (par. 147, lines 1-8).

Regarding claims 25, and 36, Arellano teaches the adaptive personal
memory comprises at least some current data (par. 89, lines 1-9; par. 127, line 6-
par. 128; par. 148. lines 6-9) and at least some snapshot data, which snapshot
data acts as a bias toward a longer term view of user behavior (par. 90, par. 18).

Regarding claims 26 and 37, Arellano teaches the operations further
comprise

capturing content (movies) and summaries (EPG/characterizations)
experienced by the relevant user (par. 109, lines 16-21; par. 100; par. 112; par.

Art Unit: 2623

148) and the relevant user's behaviors (Par. 114, lines 3-7; par. 132; par. 139-140);

analyzing the content and behaviors to create updated personal data (par. 112; par. 128);

updating the adaptive memory with the updated personal data (par. 128; par. 139-140).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 6 and 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Maissel et al. (US 6,637,029 B1).

Regarding claim 2, Arellano teaches the facts derived from content comprise information supplemental information about the content (par. 112).

However Arellano fails to specifically disclose a name of at least one person who participated in creation of a relevant piece of content.

Art Unit: 2623

In an analogous art, Maissel teaches a name of at least one person who participated in creation of a relevant piece of content for filtering out content preferred by the user (col. 11, lines 14-26; col. 12, lines 16-26).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include a name of at least one person who participated in creation of a relevant piece of content for filtering out content preferred by the user for the added advantage of providing additional information about the user's preferences to increase the effectiveness of the user model.

Regarding claims 6 and 13, Arellano teaches the facts derived from user behaviors as discussed in claim 1 above and further teaches capturing user behavior/interactions (par. 89-90; par. 132; par. 140).

However, Arellano fails to specifically disclose at least one record of play sequence commands.

In an analogous art Maissel teaches at least one record of play sequence commands for determining user behavior, e.g., channel surfing (col. 17, lines 17-61).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include at least one record of play sequence commands for the added advantages of increased user comfort by enabling the EPG to perform the user's preferred actions automatically (Maissel – col. 45-50).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Ali (US 2002/0199194 A1).

Regarding claim 5, which depends on claim 4 discussed above, Arellano teaches each index node (correlated features/content types) in the hierarchy comprises at least one link (correlation) to a content node (movie) (par. 91, lines 1-6; par. 94; par. 100; par. 112). Arellano further teaches the user analyzing/learning system computing correlations between user data/interaction history and features/feature values to choose/filter out the best content (par. 92, lines 8-12; par. 95-96; par. 140).

However fails to disclose at least one field for storing weak links to other index nodes, which weak links do not fit into the hierarchy.

In an analogous art, Ali teaches at least one field (list entry) for storing weak (worst correlating) links to other index nodes, which weak links do not fit into the hierarchy for predicting the degree of appeal of different unrated items/content (par. 62-73).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include at least one field for storing weak links to other index nodes, which weak links do not fit into the hierarchy as taught by Ali for the added advantage of providing a workable list, i.e., providing enough available data, which enables better predicting when there is not a lot of available data (Ali – par. 72).

8. Claims 15, 21, 28, 31, 39, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Elenbaas et al. (US 2005/0028194 A1).

Regarding claims 15, 21, 28, 31, 39, and 42, Arellano teaches the maintaining, analyzing, and updating steps of claim 10 make use of adaptive and learning artificial intelligence/expert/reasoning (logic) engines (par. 85; par. 92).

However, Arellano fails to disclose use of non-monotonic logic.

In an analogous art, Elenbaas teaches use of non-monotonic logic as a tool to filter programming in accordance with user preferences (par. 46, lines 10-20; par. 111).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include use of non-monotonic logic as taught by Elenbaas for the added advantage of providing a common to the art formal logic that is well suited for knowledge based/adaptive reasoning artificial intelligence systems (Arellano – par. 92, lines 3-7).

Regarding claim 44, it is rejected similar to claim 9 as discussed above.

9. Claims 16, 22, 29, 32, 33, 40 and 43, are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Elenbaas et

Art Unit: 2623

al. (US 2005/0028194 A1) as applied to claims 15, 28, 31, 39 and 42 above, and further in view of Marsh (US 2005/0185933 A1).

Regarding claims 16, 29, 32, 40, and 43, Arellano in view of Elenbaas teach non-monotonic/artificial intelligence as discussed above.

However, Arellano in view of Elenbaas fail to specifically disclose modal logic.

In an analogous art Marsh teaches modal logic (logic that handles concepts of possibility, impossibility, and/or necessity) to modify a user's profile based on passed interaction history to identify new content that could possibly interest the user in the future (par. 35-36; par. 32).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano in view of Elenbaas to include modal logic as taught by Marsh for the added advantage of increasing convenience to the user by excluding content that may have been previously identified as preferred by the system, but is possibly not because it was never viewed.

Regarding claim 22, it is rejected the same as claim 16 discussed above.

Regarding claim 33, Arellano, in view of Elenbaas and Marsh teach the forming comprises snapshots as a bias toward a longer term view of user behavior (par. 90, par. 18).

10. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arellano et al. (US 2004/0128624 A1) and Sezan et al. (US 2005/0091686 A1).

Regarding claims 18, Arellano teaches seeking (identifying) new content having content models in common with previously experienced (interacted) content (par. 112; par. 147; par. 91, lines 6).

However Arellano fails to specifically disclose a participant.

In an analogous art, Sezan teaches identifying participants (e.g., directors, actors, etc.) in new content in common with previously watched content for searching and filtering out content of preferred by the user (par. 47, lines 1-7; par. 41, lines 3-10; par. 42, lines 21-35; par. 45, lines 20-27).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include the limitation a participant as taught by Sezan for the advantage of increasing user convenience and satisfaction by identifying new content the user would like by enabling the user model/profiler to acknowledge the user's preferred actors, directors, etc.

Regarding claims 19, Arellano teaches seeking (identifying) new content having content models in common with previously experienced (interacted) content (par. 112; par. 147; par. 91, lines 6).

However Arellano fails to specifically disclose summary information.

In an analogous art, Sezan teaches identifying summary (program profile, e.g., stars in the movie, rating, keywords, categories, etc.) information in new content in common with previously watched content for searching and filtering out content of preferred by the user (par. 47, lines 1-7; par. 41, lines 3-10; par. 42, lines 21-35; par. 45, lines 20-27).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the system of Arellano to include the limitation summary information as taught by Sezan for the advantage of increasing user convenience and satisfaction by identifying new content the user would like by enabling the user model/profiler to acknowledge the user's preferred content profiles.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clyde H. Jones III whose telephone number is 571-272-5946. The examiner can normally be reached on 9-5:30 p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJ



CHRISTOPHER GRANT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600